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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/758,904	01/16/2004	Gun-Hec Park	678-1144	7077
66547 7590 06/26/2007 THE FARRELL LAW FIRM, P.C. 333 EARLE OVINGTON BOULEVARD SUITE 701 UNIONDALE, NY 11553			EXAMINER RAMAKRISHNAIAH, MELUR	
			ART UNIT 2614	PAPER NUMBER
			MAIL DATE 06/26/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/758,904

Applicant(s)

PARK, GUN-HEE

Examiner

Melur Ramakrishnaiah

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-3, 6-7, 8, 14, 15-17, 20-21, are rejected under 35 U.S.C 102(e) as being anticipated by Roberts (US PAT: 6,490,351).

Regarding claim 1, Roberts discloses a mobile phone charger for charging a battery of a mobile phone with a prescribed voltage, comprising: a charging current generator in (76, fig. 7) for generating charging current to charge the battery of the mobile phone upon receiving input current, and selectively generating the charging current upon receiving a charging initiation signal, and a sterilizer (22, fig. 7) being driven by the charging current from the charging current generator, and sterilizing the battery and the mobile phone at predetermined intervals (col. 2 lines 40-46; col. 3 lines 11-13, lines 32-36; col. 4 lines 22-31, lines 60-65; col. 8 lines 33-65).

Regarding claim 8, Roberts discloses a method for sterilizing a mobile phone using a mobile phone charger, comprising the steps of: generating a charging current to charge a battery of the mobile phone upon receiving an input current, determining whether the mobile phone is mounted to a charging connector (reads on actuation of switch 16, fig. 7) transferring the current to the mobile phone, and if the mobile phone is

mounted to a charging connector, sterilizing the mobile phone at predetermined time intervals using the charging current (col. 2 lines 40-46; col. 3 lines 11-13, lines 32-36; col. 4 lines 22-31, lines 60-65; col. 8 lines 33-65).

Regarding claim 15, Roberts discloses a mobile phone charger for charging a battery of a mobile phone with a prescribed voltage, comprising: a charging current generator in (76, fig. 7) for generating charging current to charge the battery of the mobile phone upon receiving input current, and providing the mobile phone with charging current, a charging connector (reads on 16, fig. 1) connected to the mobile phone (70, fig. 1), and receiving charging status information from the mobile phone (reads on indicator light status: col. 4, line 60 – col. 5, line 6), and a sterilizer (22, fig. 1) for generating a wavelength signal corresponding to the charging current after the mobile phone is mounted to the charging connector, and sterilizing the mobile phone mounted on the charging connector at predetermined intervals (col. 2 lines 40-46; col. 3 lines 11-13, lines 32-36; col. 4 lines 22-31, lines 60-65; col. 8 lines 33-65).

Regarding claims 2-3, 6-7, 14, 16-17, 20-21, Roberts teaches the following: sterilizer (22, fig. 1) executes sterilization function for sterilizing the mobile phone (70, fig. 7) and the battery while charging function for charging the battery with the charging current is executed and terminates the sterilization function when the charging function is terminated, charging current generator in (76, fig. 7) outputs different charging currents according to a charging mode, and sterilizer repeatedly executes and terminates the sterilization function according to charging mode, wherein the sterilizer (22, fig. 1) is one of infrared sterilizer and an ultraviolet sterilizer, step of sterilizing

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mobile phone (70, fig. 7) using one of infrared sterilization process and an ultraviolet sterilization processes, sterilizer (22, fig. 7) executes a sterilization function of the mobile phone (70, fig. 7) if it is determined that the battery of the mobile phone is being charged with the charging current on the basis of charging status information (reads on indicator light status: col. 4, line 60 – col. 5, line 6), charging current generator in (76, fig. 7) provides the mobile phone with different charging current according to a charging mode (this is implicit as it is well known charging current depends upon the state of the battery in the mobile phone being charged), and sterilizer repeatedly executes the sterilization function according to the charging mode, phone charger generates different wavelengths from among wavelengths within a predetermined range (col. 2 lines 42-57) upon receiving the charging current, and executing the sterilization function (col. 2 lines 40-46; col. 3 lines 11-13, lines 32-36; col. 4 lines 22-31, lines 60-65; col. 8 lines 33-65).

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 4-5, 9-13, 18-19, 22-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roberts in view of Matsuo (US PAT: 6,526,293, filed 6-4-1998).

Roberts differs from claims 4, 9-12, 18 in that he does not specifically teach the following: charging mode is set to any one of pre-charge mode, a constant current mode, and a constant voltage mode, checking a voltage value charged in the battery of

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the mobile phone mounted to the charging connector, comparing the checked voltage value with a predetermined voltage value, if checked voltage is lower than the predetermined voltage value, transmitting the charging current to the mobile phone mounted to the charging connector, and charging the battery with the charging current, if the checked voltage value is higher than the predetermined voltage value, terminating the charging current applied to the mobile phone, if the charging current is terminated, terminating charging of the battery of the mobile phone, outputting different charging currents according to a charging mode.

However, Matsuo discloses wireless communication apparatus having rechargeable battery which teaches the following: charging mode is set to any one of pre-charge mode, a constant current mode, and a constant voltage mode, checking a voltage value charged in the battery of the mobile phone mounted to the charging connector, comparing the checked voltage value with a predetermined voltage value, if checked voltage is lower than the predetermined voltage value, transmitting the charging current to the mobile phone mounted to the charging connector, and charging the battery with the charging current, if the checked voltage value is higher than the predetermined voltage value, terminating the charging current applied to the mobile phone, if the charging current is terminated, terminating charging of the battery of the mobile phone, outputting different charging currents according to a charging mode (fig. 2; col. 3, line 55 – col. 4, line 64).

Thus, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify Roberts' system to provide for the following: charging

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mode is set to any one of pre-charge mode, a constant current mode, and a constant voltage mode, checking a voltage value charged in the battery of the mobile phone mounted to the charging connector, comparing the checked voltage value with a predetermined voltage value, if checked voltage is lower than the predetermined voltage value, transmitting the charging current to the mobile phone mounted to the charging connector, and charging the battery with the charging current, if the checked voltage value is higher than the predetermined voltage value, terminating the charging current applied to the mobile phone, if the charging current is terminated, terminating charging of the battery of the mobile phone, outputting different charging currents according to a charging mode as this arrangement would provide for optimum procedure for charging the battery of mobile phone as taught by Matsuo.

Regarding claims 5, 13, 19, Roberts teaches the following: sterilizer (22, fig. 7) executes the sterilization function for a predetermined time when ever charging mode changes to another mode (col. 4 lines 10-16).

Regarding claims 22, Roberts discloses a method of sterilizing mobile phone using a mobile phone charger with a sterilization function for sterilizing the mobile phone and a battery of the mobile phone, comprising the steps of: determining if the mobile phone is mounted to the mobile phone charger (reads on status of the switch 16, fig. 7), if so, providing the mobile phone with a charging current, determining whether the mobile phone receives charging status information indicative of a charging function active/inactive state of the battery and executing a sterilization function of the mobile

phone (col. 1, line 65 – col. 5, line 6; col. 2 lines 40-46; col. 3 lines 11-13, lines 32-36; col. 4 lines 22-31, lines 60-65; col. 8 lines 33-65).

Roberts differs from claim 22 –23 in that although he discloses starting sterilization function when mobile phone is connected to a battery charger as shown in fig. 7, he does not specifically teach using logic states such as high or low states to determine charging status information.

However, Matsuo discloses use of logic states to indicate charging condition (fig. 2 col. 5 lines 14-35).

Thus, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify Roberts' system to provide for the following: specifically teach using logic states such as high or low states to determine charging status information as this arrangement would provide additional control logic to initiate charging as taught by Matsuo, thus control sterilization phase of Roberts apparatus.

Regarding claims 24-26, 29, Roberts further teaches the following: sterilization function is repeatedly executed at predetermined intervals (col. 4 lines 22-31 lines 60-65), sterilization function is executed by generating different wavelengths from wavelengths within a predetermined range (col. 2 lines 40-57), sterilization function uses one of an infrared process and an ultraviolet sterilization process to sterilize the phone (col. 2 lines 40-57), step of executing the sterilization function for a predetermined time whenever charging mode is changed (col. 4 lines 8-16).

Roberts differs from claims 27-28 in that although he teaches sterilizing mobile phone while charging its battery as shown in fig. 7, he does not specifically teach the



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following: step of generating different charging currents according to a charging mode, charging mode is set to any one of a pre-charge mode, a constant current mode, and a constant voltage mode.

However, Matsuo teaches the following: step of generating different charging currents according to a charging mode, charging mode is set to any one of a pre-charge mode, a constant current mode, and a constant voltage mode (col. 3, line 55 – col. 4, line 64).

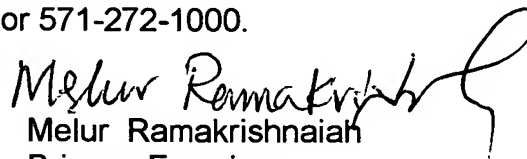
Thus, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify Roberts' system to provide for the following: step of generating different charging currents according to a charging mode, charging mode is set to any one of a pre-charge mode, a constant current mode, and a constant voltage mode as this arrangement would provide for optimum procedure for charging the battery of mobile phone as taught by Matsuo.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melur Ramakrishnaiah whose telephone number is (571)272-8098. The examiner can normally be reached on 9 Hr schedule.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Curt Kuntz can be reached on (571) 272-7499. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
Melur Ramakrishnaiah  
Primary Examiner  
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